

Attorney's Docket No.:06618-928001

Amendments to the Specification:

Please replace the paragraph beginning at page 5, line 15, paragraph [0011], with the following amended paragraph:

[0011] One of the ~~application~~ applications of the above tunable filter is to ~~used~~ use it in a receiver which receives a radiation signal carrying a plurality of signal channels and extracts a selected channel from the received signal channels. This receiver may include an optical modulator to modulate an optical beam in response to the radiation signal to produce a modulated optical signal carrying the signal channels. The optical filter is located to receive and filter the modulated optical signal to produce a filtered optical output that carries only the selected signal channel. An optical detector is provided to convert the filtered optical output into an electrical signal. The receiver also includes a mixer that mixes the electrical signal with a reference signal to extract the selected signal channel.

Please replace the paragraph beginning at page 13, line 22, paragraph [0031], with the following amended paragraph:

[0031] FIGS. 6A and 6B show an example of a tunable electro-optic WGM resonator filter 600. The electro-optic material for the ~~entire~~ entirety or part of the resonator 610 may be any suitable material, including an electro-optic crystal such as Lithium Niobate and semiconductor multiple quantum well structures. One or more electrodes 611 and 612 may be formed on the resonator 610 to apply a control electrical field in at least the region where the WG modes are present to control the index of the electro-optical material and to change the filter function of the resonator. Assuming the resonator 610 has disk or ring geometry as in FIG. 4A or 4B, the electrode 611 may be

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formed on the top of the resonator 610 and the electrode 612 may be formed on the bottom of the resonator 610 as illustrated in the side view of the device in FIG. 6B. In one implementation, the electrodes 611 and 612 may constitute an RF or microwave resonator to apply the RF or microwave signal to co-propagate along with the desired optical WG mode. For example, the electrodes 611 and 612 may be microstrip line electrodes. The electrodes 611 and 612 may also form an electrical waveguide to direct the electrical control signal to propagate along the paths of the WG modes. A filter control unit 630 such as a control circuit may be used to supply the electrical control signal to the electrodes 611 and 612.